A+ Evidence: How to Tell if Your Evidence-Based Intervention Meets ESSA Requirements

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Outline

- Introductions
- Background/Importance
- Process
- Examples/Activities
- We will be using Pear Deck to interact with you (need a Google account)
  www.peardeck.com/join

Office of Title Grants and Support

Federal Grants

- Title I
- Title II
- School Improvement Grants
- Neglected and Delinquent

Special Programs

- Title IV
- Charter School
- Rural Low Income
- 21st Century Community Learning Centers

EL and Migrant

- English Learners
- Refugee
- Migrant
- McKinney-Vento

Ombudsman

Data Coach

Bilingual Support

Data Coaching Services

All Things Data

Technical Assistance

Research and Evaluation

Resources

Learning Opportunities

What words do you think of when you hear Evidence-Based Interventions?

Students, write your response!

What is an Evidence-Based Intervention?

Actions that have been proven effective through rigorous outcome evaluations (i.e., quantitative-focused studies). If implemented with fidelity, the intervention is expected to positively change outcomes.

ESSA

(iii) the opportunity to participate fully in society.

(21) EVIDENCE-BASED.—

(A) IN GENERAL.—Except as provided in subparagraph (B), the term "evidence-based", when used with respect to a State, local educational agency, or school activity, means an activity, strategy, or intervention that—

(i) demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes based on—

(I) strong evidence from at least 1 well-designed and well-implemented experimental study;

(II) moderate evidence from at least 1 well-designed and well-implemented quasi-experimental study; or

(III) promising evidence from at least 1 well-designed and well-implemented correlational study with statistical controls for selection bias; or

(ii)(I) demonstrates a rationale based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to im-

As Amended Through P.L. 115-224, Enacted July 31, 2018

CNA/SIP: What IDOE is Looking For

SIP Phase 4: Select Evidence-Based Interventions that Address the School's Focus Areas		
Required Component	*Quality Indicators*	*Feedback*
The SIP development team needs to identify evidence-based interventions that address the specific gaps between the school's existing improvement strategies (as described in Phase 3 of the SIP) and the key findings and root causes of its focus areas. To do so, the team is encouraged to follow the steps outlined to the right.	Focus Area 1 ☐ List the strategies from the core components in Phase 3 of the SIP that address this focus area. ☐ Describe the key findings and root causes, if any, for this focus area that are not sufficiently addressed by these strategies from the core components. To do so, the SIP development team is encouraged to closely review the greyed cells in the "gap analysis" sections of SIP Phase 3. ☐ Describe the evidence-based intervention(s) that the school has identified to address the key findings and root causes for this focus area that are not sufficiently	

SIG Submissions

The LEA must complete the table below for *each* of the evidence-based interventions that will be utilized in the CSI school and supported with grant funds. Please duplicate the table below as needed.

Evidence-Based Intervention (EBI):		
Description	Citation(s)	Proposed Amount of Title I School Improvement Grant Funds to Be Used
Annual Goal for this EBI:		
Measure(s) of Success for this Annual Goal:		
Benchmark 1:		
Benchmark 2:		

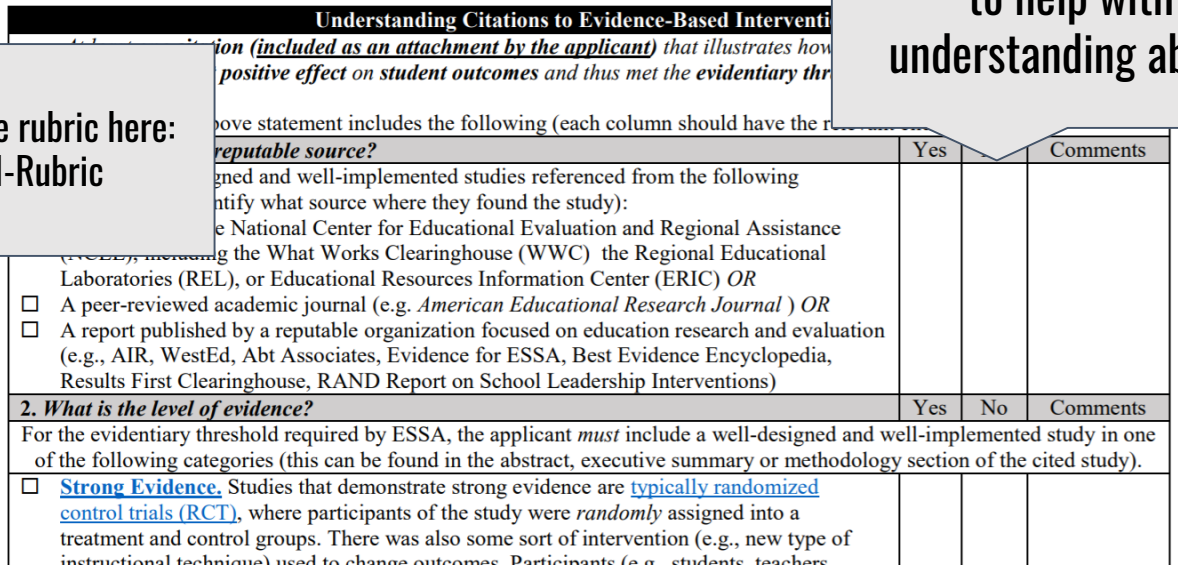
Why Does It Matter?

- The evidentiary threshold can't be met with a couple of citations
  - Provide copies of the studies in your application
- Quantitative studies are required
  - Randomized control trials, quasi-experimental designs, etc.
  - This does not mean that qualitative studies (e.g., case studies, conceptual papers) aren't important, they just are not included in determinations of EBI thresholds for ESSA

EBI Rubric

We are going to dissect this to help with your understanding about EBI's

You can also access the rubric here: https://tinyurl.com/EBI-Rubric



Understanding Citations to Evidence-Based Interventi

…ion (included as an attachment by the applicant) that illustrates how …
… positive effect on student outcomes and thus met the evidentiary thr…

…ove statement includes the following (each column should have the r…

…reputable source?	Yes		Comments
…gned and well-implemented studies referenced from the following …ntify what source where they found the study): …e National Center for Educational Evaluation and Regional Assistance …g the What Works Clearinghouse (WWC) the Regional Educational Laboratories (REL), or Educational Resources Information Center (ERIC) *OR* ☐ A peer-reviewed academic journal (e.g. *American Educational Research Journal*) *OR* ☐ A report published by a reputable organization focused on education research and evaluation (e.g., AIR, WestEd, Abt Associates, Evidence for ESSA, Best Evidence Encyclopedia, Results First Clearinghouse, RAND Report on School Leadership Interventions)			
2. *What is the level of evidence?*	Yes	No	Comments
For the evidentiary threshold required by ESSA, the applicant *must* include a well-designed and well-implemented study in one of the following categories (this can be found in the abstract, executive summary or methodology section of the cited study).			
☐ **Strong Evidence.** Studies that demonstrate strong evidence are typically randomized control trials (RCT), where participants of the study were *randomly* assigned into a treatment and control groups. There was also some sort of intervention (e.g., new type of instructional technique) used to change outcomes. Participants (e.g., students, teachers			

Students browse: www.doe.in.gov/sites/default/files/news/june-14-ebi-clarification-...

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Steps in the Process

Step 1	• Find the study
Step 2	• Is the study from a reputable source?
Step 3	• Assess the level of evidence
Step 4	• Identify statistical significance + positive effect
Step 5	• Connect student outcomes
Step 6	• Put a citation on it

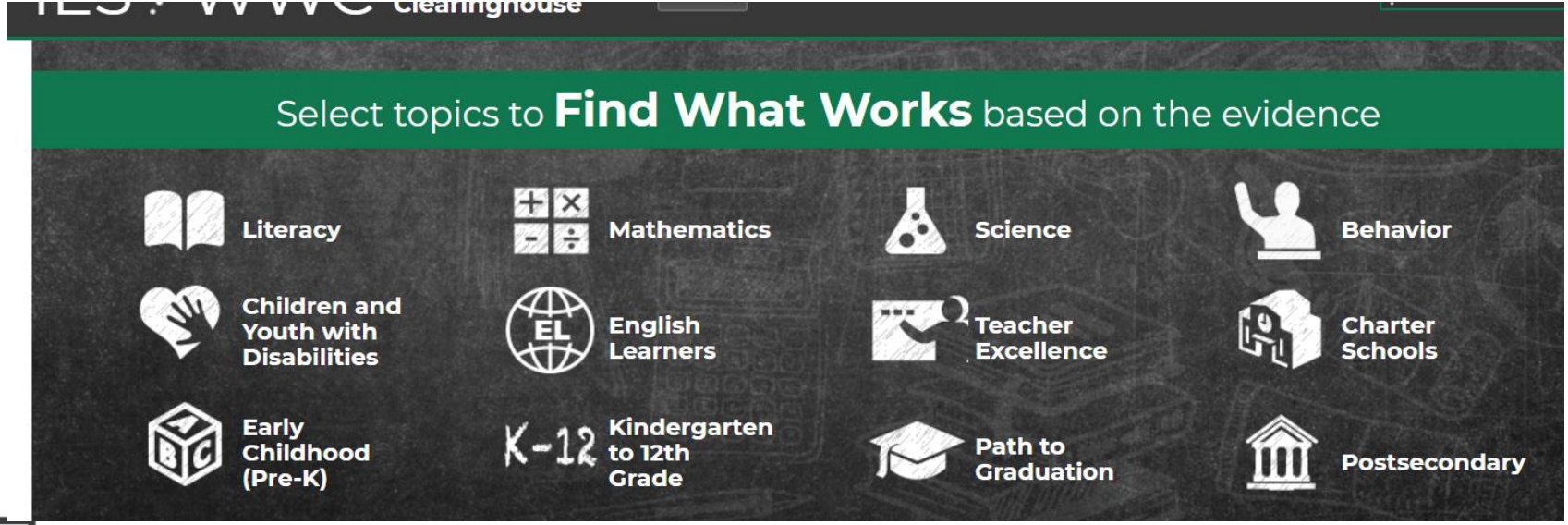
Quick Note

- Research-based vs. evidence-based
  - Research-based: theories behind it (abstract)
  - Evidence-based: empirical proof (concrete)
    - The intervention was compared to something
    - Outcomes measured with valid and reliable instruments
    - Description of how program was implemented: replicability
    - Effect sizes reported
- No meta-analyses or reviews of research
- Quality over quantity

Step 1: Find the Study

- Understandably, the most difficult part!
- Some good places to start are located in the EBI Resources document, which can be found in the following folder: https://tinyurl.com/EdDataResources
- Abstract/General vs. Concrete/Specific
- Include the original study

What Works Clearinghouse



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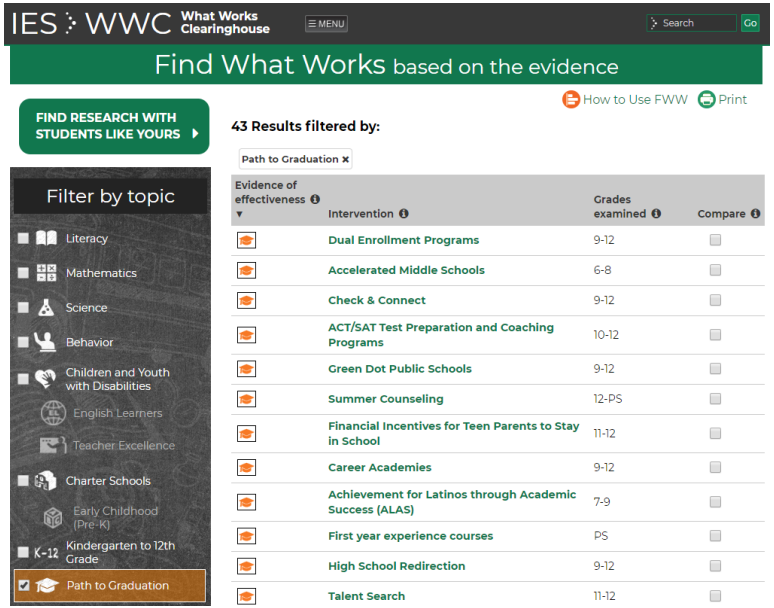
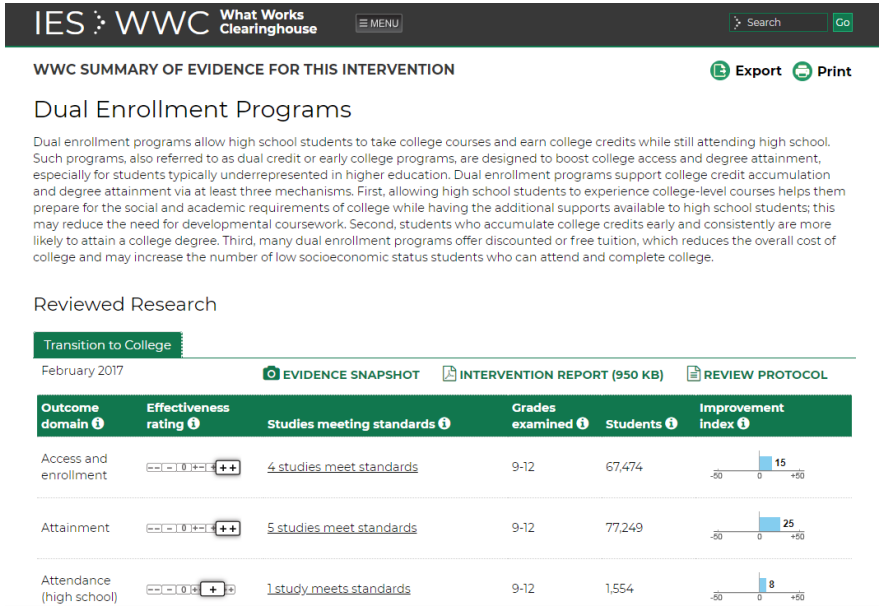
Example





Students browse: ies.ed.gov/ncee/wwc/FWW/Results?filters=,Path-to-Graduation

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Hattie's Meta-Analysis Work

Visible Learning^{plus} 250+ Influences on Student Achievement

STUDENT	ES
Prior knowledge and background	
Field independence	0.68
Non-standard dialect use	-0.29
Piagetian programs	1.28
Prior ability	0.94
Prior achievement	0.55
Relating creativity to achievement	0.40
Relations of high school to university achievement	0.60
Relations of high school achievement to career performance	0.38
Self-reported grades	1.33
Working memory strength	0.57
Beliefs, attitudes and dispositions	
Attitude to content domains	0.35
Concentration/persistence/ engagement	0.56
Grit/incremental vs. entity thinking	0.25
Mindfulness	0.29
Morning vs. evening	0.12
Perceived task value	0.46
Positive ethnic self-identity	0.12
Positive self-concept	0.41
Self-efficacy	0.92
Stereotype threat	0.33
Student personality attributes	0.26

CURRICULA	ES
Reading, writing and the arts	
Comprehensive instructional programs for teachers	0.72
Comprehension programs	0.47
Drama/arts programs	0.38
Exposure to reading	0.43
Music programs	0.37
Phonics instruction	0.70
Repeated reading programs	0.75
Second/third chance programs	0.53
Sentence combining programs	0.15
Spelling programs	0.58
Visual-perception programs	0.55
Vocabulary programs	0.62
Whole language approach	0.06
Writing programs	0.45
Math and sciences	
Manipulative materials on math	0.30
Mathematics programs	0.59
Science programs	0.48
Use of calculators	0.27
Other curricula programs	
Bilingual programs	0.36
Career interventions	0.38
Chess instruction	0.34

HOME	ES
Family structure	
Adopted vs non-adopted care	0.25
Engaged vs disengaged fathers	0.20
Intact (two-parent) families	0.23
Other family structure	0.16
Home environment	
Corporal punishment in the home	-0.33
Early years' interventions	0.44
Home visiting	0.29
Moving between schools	-0.34
Parental autonomy support	0.15
Parental involvement	0.50
Parental military deployment	-0.16
Positive family/home dynamics	0.52
Television	-0.18
Family resources	
Family on welfare/state aid	-0.12
Non-immigrant background	0.01
Parental employment	0.03
Socio-economic status	0.52

SCHOOL	ES
Leadership	
Collective teacher efficacy	1.57
Principals/school leaders	0.32
School climate	0.32
School resourcing	
External accountability systems	0.31
Finances	0.21
Types of school	
Charter schools	0.09
Religious schools	0.24
Single-sex schools	0.08
Summer school	0.23
Summer vacation effect	-0.02
School compositional effects	
College halls of residence	0.05
Desegregation	0.28
Diverse student body	0.10
Middle schools' interventions	0.08
Out-of-school curricula experiences	0.26
School choice programs	0.12
School size (600-900 students at secondary)	0.43
Other school factors	
Counseling effects	0.35
Generalized school effects	0.48

The Visible Learning research synthesises findings from **1,400** meta-analyses of **80,000** studies involving **300** million students, into what works best in education.

Key for rating

- Potential to considerably accelerate student achievement
- Potential to accelerate student achievement
- Likely to have positive impact on student achievement
- Likely to have small positive impact on student achievement
- Likely to have a negative impact on student achievement

Students browse: visible-learning.org/wp-content/uploads/2018/03/VLPLUS-252-Influen...

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Step 2: Is the Study from a Reputable Source?

- You can typically find well-designed and well-implemented studies from these places:
  - An entity from the National Center for Educational Evaluation and Regional Assistance (NCEE), including the What Works Clearinghouse (WWC) the Regional Educational Laboratories (REL), or Educational Resources Information Center (ERIC)
  - A peer-reviewed academic journal (e.g. American Educational Research Journal)
  - A report published by a reputable organization focused on education research and evaluation (e.g., AIR, WestEd, Abt Associates, Evidence for ESSA, Best Evidence Encyclopedia, Results First Clearinghouse, RAND Report on School Leadership Interventions)
  - These are all linked in the EBI Resources document, which can be found in the following folder: https://tinyurl.com/EdDataResources

Step 3: Assess the Level of Evidence

✓ Strong Evidence	• Randomized control trials where participants were randomly assigned into a treatment and control groups • Some sort of intervention used to change outcomes
✓ Moderate Evidence	• Typically quasi-experimental designs (QED), where participants were not randomly assigned into treatment and comparison groups • Some natural change created a group that received the treatment/intervention, and one that did not
✓ Promising Evidence	• Includes correlational studies, with statistical controls for selection bias. • Will not include treatment and control/comparison groups • Researchers examine relationships among specific variables and the outcomes
✗ Demonstrates a Rationale	• Not an acceptable level of evidence, though they might have a strong logic behind the intervention, or some promising preliminary data

Step 4: Identify Statistical Significance + Positive Effect

- **Statistical significance**
  - Something is unlikely to happen by chance
  - In other words, the intervention did *something* to change the outcomes that can't be attributed to business as usual

- **Positive effect**
  - It's a positive change in the outcome, not necessarily a "+" sign
  - In other words, was the change *large enough*?

Step 5: Connect Student Outcomes

- Outcomes measured in the study should be relevant to the setting and student population that you serve
  - State the extent to which the participants in the study are similar to those who would participate in the intervention
  - It helps if this study was conducted at multiple classrooms, schools or districts
- Is the study setting similar to your LEA (grade level, urban/rural/suburban)?
- Is the student population (FRL EL, SpED, race/ethnicity) in the study similar to your LEA?
- The outcome(s) measured should also be reliable (can be replicated) and have face validity (measures what it claims to be measuring).

Step 6: Put a Citation on It

- Once you're done, make sure you cite the source and include the document
- Please use APA format

School Improvement Grants

Posted: Fri, 12/11/2015 - 9:12am Updated: Tue, 07/23/2019 - 8:22am

FY 20 SIG Implementation Funding

- Webinar
- Video

Title I, A School Improvement Fund Number(s)	Title I, A School Improvement Receipt Number
4100-4299	4514

1003

EBI Rubric

- Annotated study that meets the Strong category and can be used as EBI for SIG purposes
- Annotated study that represents high-quality research but cannot be used as EBI for SIG purposes

Title I School Impr Grants

- Federal Legislation, Regula Guidance
- Title I Application and Rep
- Title I, Part D

Contact

Nathan Williamson
Director of Title Grants an
nwilliamson@doe.in.gov
(317) 232-6671

Students browse: www.doe.in.gov/sig

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Example 1: Annotated Study that Meets the Strong Category and Can Be Used as EBI for SIG Purposes

Scaling up an Early Reading Program: Relationships among Teacher Support, Fidelity of Implementation, and Student Performance across Different Sites and Years
Author(s): Marc L. Stein, Mark Berends, Douglas Fuchs, Kristen McMaster, Laura Sáenz, Loulee Yen, Lynn S. Fuchs and Donald L. Compton
Source: *Educational Evaluation and Policy Analysis*, Vol. 30, No. 4 (Dec., 2008), pp. 368-388
Published by: American Educational Research Association
Stable URL: https://www.jstor.org/stable/25478677
Accessed: 17-05-2019 17:35 UTC

Example 2: Annotated Study that Represents High-Quality Research but Cannot be Used as EBI for SIG Purposes

Psychology in the Schools, Vol. 45(2), 2008
Published online in Wiley InterScience (www.interscience.wiley.com)

DOI: 10.1002/pits.20283

EXAMINING THE RELATIONSHIP BETWEEN TREATMENT OUTCOMES FOR ACADEMIC ACHIEVEMENT AND SOCIAL SKILLS IN SCHOOL-AGE CHILDREN WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER

LAURA E. RUTHERFORD, GEORGE J. DuPAUL, AND ASHA K. JITENDRA

Lehigh University

The purpose of this study was to determine the relationship between treatment-induced changes in academic achievement and social skills in elementary school-age children with attention-deficit hyperactivity disorder. A sample of 123 children in grades 1 through 4 with symptoms of inattention, impulsivity and/or hyperactivity, and significant achievement problems in math or reading were identified for participation. Participants were exposed to academic interventions mediated

Students browse: www.doe.in.gov/sites/default/files/news/june-14-demonstrates-ratio...

Example

SMALL-GROUP, COMPUTER
TUTORING TO IMPROVE RI
OUTCOMES FOR STRUGGLI
AND SECOND GRADERS

Journal of Research on Educational Effe
Copyright © Taylor & Francis Group, L
ISSN: 1934-5747 print / 1934-5739 onli
DOI: 10.1080/19345740801941357

Computer-Assisted
Reading Outc

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Johns Hopkins Uni

Philip Abra

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American Educational Research Journal
September 2007, Vol. 44, No. 3, pp. 701–731
DOI: 10.3102/0002831207306743
© AERA 2007. http://aerj.aera.net

Final Reading Outcomes of the National Randomized Field Trial of Success for All

Geoffrey D. Borman
University of Wisconsin–Madison
Robert E. Slavin
Johns Hopkins University and University of York
Alan C. K. Cheung
Hong Kong Institute of Education
Anne M. Chamberlain
Success for All Foundation
Nancy A. Madden
Bette Chambers
Johns Hopkins University and University of York

Educational Evaluation and Policy Analysis
Winter 2002, Vol. 24, No. 4, pp. 243–266

ost-Effectiveness of Success for All

y D. Borman
Wisconsin, Madison

M. Hewes
kins University

pelling evidence of enduring achievement effects for
ian Project; and the Tennessee Class-Size Experiment.
tion of such model programs, though, represent key
ng-term outcomes and costs of another popular early
ols, Success for All students completed 8th grade at a
fewer special education placements, fewer retentions,
ost-effectiveness comparisons to the three prominent
serving of similar recognition as a sound educational
cational benefits. None of these exemplary programs,
izer."

EBI Worksheet

Indiana
DEPARTMENT OF EDUCATION

Dr. Jennifer McCormick
Superintendent of Public Instruction

Working Together for Student Success

EBI Worksheet
Complete for Each Study Used to Support your EBI

Intervention Name	Success for All
Description of Intervention	Success for All is a schoolwide program for Pre-K—6 students that organizes resources to ensure that virtually every student acquires basic skills and builds on this foundation throughout the elementary grades, so that no student will be allowed to "fall between the cracks" (p.727). The main elements of the program include: schoolwide instructional processes; schoolwide curriculum: tutors; quarterly assessments and regrouping; solutions team, and facilitator

Students browse: drive.google.com/drive/folders/130VG_uw8ce5W6YZuqMaSkNpEmx_XpjUw?u

Check the Abstract

Using a cluster randomization design, schools were randomly assigned to implement Success for All, a comprehensive reading reform model, or control methods. This article reports final literacy outcomes for a 3-year longitudinal sample of children who participated in the treatment or control condition from kindergarten through second grade and a combined longitudinal and in-mover student sample, both of which were nested within 35 schools. Hierarchical linear model analyses of all three outcomes for both samples revealed statistically significant school-level effects of treatment assignment as large as one third of a standard deviation. The results correspond with the Success for All program theory, which emphasizes both comprehensive school-level reform and targeted student-level achievement effects through a multi-year sequencing of literacy instruction.

Check the Methods Section

The experimental and control schools included in the Year 3 analyses of outcomes are listed in Table 1. The sample is largely concentrated in urban Midwest locations, such as Chicago and Indianapolis, and in the rural and small town South, though there are some exceptions. The schools are situated in communities with high poverty concentrations, with just a few rural exceptions. Approximately 72% of the students participate in the federal free lunch program, which is similar to the 80% free lunch participation rate for the nationwide population of Success for All schools. The sample is more African American and less Hispanic than Success for All schools nationally. Overall, 56% of the sample is African American, compared to about 40% of Success for All students nationally, and 10% of the sample is Hispanic, compared to the national average of 35%. The percent of White students, 30%, is similar to the Success for All percentage White of about 25%.

Table 2 compares the baseline characteristics of the experimental and control schools included in the analyses of Year 3 outcomes. As the results suggest, the 18 experimental and 17 control schools were reasonably well matched on demographics, and there were no statistically significant school-level aggregate pretest differences on the Peabody Picture Vocabulary Test. As demonstrated in Borman et al. (2005a), the original sample of 21 treatment and 20 control schools was also well matched, with no statistically significant differences on demographics or pretest scores.

Treatment Fidelity

Trainers from the Success for All Foundation made quarterly implementation visits to each school, as is customary in all implementations of the Success

Check the Methods Section

moving student cohorts. Children who were English language learners but were taught in English were posttested in English each year.

The students were individually assessed by trained testers who were unaware of students' experimental or control assignments. Testers recruited for the study were primarily graduate students. All testers had extensive experience with children and had some prior experience conducting standardized testing. Prior to each spring testing period, the testers participated in a 2-day training session led by the researchers. The testers completed a written test and participated in a practice session of at least half of one day with children who were not in the study. The practice sessions were observed and critiqued by members of the research team. Testers returned for additional practice until the researchers were confident that they fully understood the methods for administering the instruments.

Pretests. All children were individually assessed in fall 2001 (first phase) or fall 2002 (second phase) on the PPVT III. This assessment served as the pretest measure for all of the reported analyses.

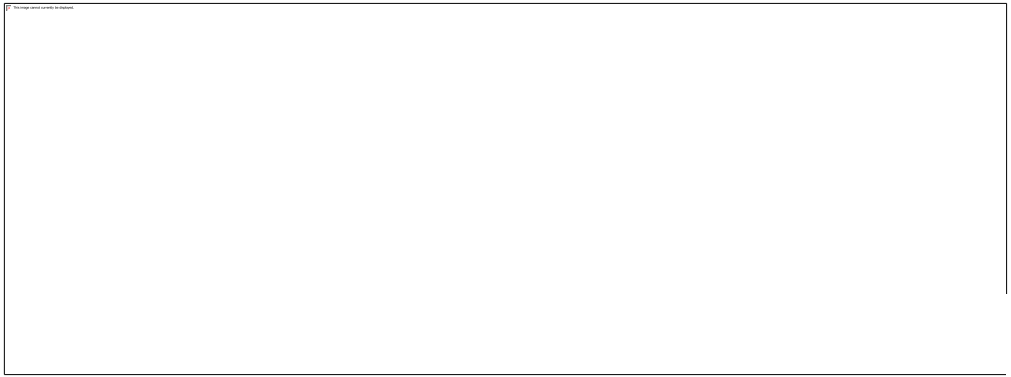
Posttests. During the spring of 2002, 2003, and 2004 (first phase) and the spring of 2003, 2004, and 2005 (second phase), students in the kindergarten longitudinal cohort were individually assessed with the WMTR. During Year 1 and Year 2, four subtests of the WMTR were administered: Letter Identification, Word Identification, Word Attack, and Passage Comprehension. During this final year of data collection though, the Letter Identification subtest was not administered because it does not test content that is typically taught in second-grade classrooms.

Each of the three subtests of the WMRT required the child to complete

Check the Results

three outcomes, the impact estimate for Success for All assignment ranged from a standardized effect of approximately $d = .21$ for Passage Comprehension to $d = .33$ for the Word Attack subtest. All three of the treatment effects were statistically significant, with the impact on Word Attack of .33 at the $p < .01$ level of confidence, the impact on Word Identification of .22 at the $p < .05$ level, and the treatment effect on Passage Comprehension of .21 at the $p < .05$ level of confidence. In all three models, the school-level mean pretest covariate was an important predictor of the outcome, with higher initial PPVT pretest scores predicting higher Year 3 posttest scores.

Check the Discussion



years of implementation suggest that the program is sufficiently comprehensive to impact all children attending Success for All schools regardless of the number of years they were exposed to the intervention. Like the advantages for the longitudinal cohort though, these effects emerged over time, spreading across the literacy domain with each ensuing year of implementation. It should be noted though that the emergence of these schoolwide effects over time is largely explained by the developmental progress of the students who experienced the program across all 3 school years. Even by Year 3 of the study, the majority of students, 69%, had remained in the Success for All and control schools over the full longitudinal period. But, it is also possible that these schoolwide improvements, found for both those students who remained in the schools across all 3 years of the study and those children who moved into the schools over the 3 years, suggest organizational learning and development. That is, the treatment may become more efficacious as teachers and staff at the Success for All schools become more familiar with the procedures demanded by the program and as the quality of implementation has time to improve.

Check the Conclusion

Conclusion

Using the Success for All model, the reform was replicated across 18 schools serving approximately 10,000 children in districts throughout the United States. The findings of statistically significant positive achievement effects from this large-scale implementation of a randomized field trial of a routine practice program are unusual for studies in education. This study is unlike other renowned randomized trials that also demonstrated the efficacy of early educational interventions, including the evaluation of 58 children from the Perry Preschool program in Ypsilanti, Michigan (Schweinhart et al., 2005) and the study of 57 children attending the Abecedarian early childhood program in one site in North Carolina (Campbell & Ramey, 1994). The effects noted in this study are not based on a model implementation operating in one location as a demonstration of the optimal impact of an educational program. Instead, the results should be interpreted as those that are likely to be obtained in broad-based implementations of Success for All, with all the attendant problems of start-up and of maintaining quality at scale. In this sense, this multisite field trial provides experimental evidence of the widespread

Activity

Links to EBI Resources and Data Intake Form

https://tinyurl.com/EdDataResources

tinyurl.com/IDOEDataCoaching

Thank You!

Please remember to fill out the data survey:
https://tinyurl.com/EdDataSurvey

Gina Romano, Senior Data Coach Specialist
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